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(54) Title: USING AMINES OR AMINO ACIDS AS MOBILE PHASE MODIFIERS IN CHROMATOGRAPHY

(57) Abstract: This invention relates to the use of amine, amino acid or amino acid ester mobile phase modifiers in normal phase chromatography to improve the resolution and/or productivity of peptide and lipopeptide purification. This chromatographic method can be used for either on analytical or preparative scale purification.

WO 2004/042350 A3

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/33978

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B01D 15/00, 15/08; C07K 14/00  
US CL : 210/656, 660; 530/300, 350, 359, 412, 415, 417

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
U.S. : 210/656, 660; 530/300, 350, 359, 412, 415, 417

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4,784,988 (BRUZZESE et al) 15 November 1988 (15.11.1988), column 12, lines 25-68.	1-6 and 12
X	US 4,812,442 (BOGER et al) 14 March 1989 (15.11.1988), column 38, lines 34-50.	1-6 and 12
X	JP 11023558A (TOSOH CORP.) 29 January 1999 (29.01.1999) Abstract.	1-3
Y	US 6,153,590 A (ANDERSEN et al) 28 November 2000 (28.11.2000), column 24, lines 7-18.	1, 2, 4 and 5

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

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"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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**INTERNATIONAL SEARCH REPORT**

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**Continuation of B. FIELDS SEARCHED Item 3:**

EAST Search on USPAT, DERWENT, EPO, JPO, USGPUB; STN search on MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA. Search term used: chromatograph?, silica gel, alumina, normal phase, modifier, purif?, isolat?, amine, amino acid, aniline, peptide, lipopeptide, oxytocin, bradykinin, caspofungin, micafungin, cilogungin, andulifungin, daptomycin, pneumocandin, mobile phase, elut?.